

## Patent Abstracts of Japan

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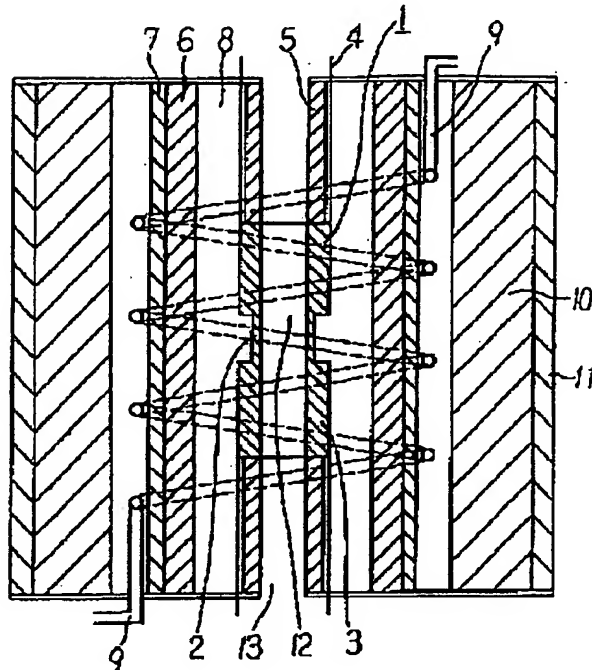
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APPLICANT : SHINAGAWA REFRACT CO LTD;

INVENTOR : MORIWAKI MASAHIRO;

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TITLE : ULTRAHIGH TEMPERATURE TESTING  
OR TREATING METHOD



**ABSTRACT :** PURPOSE: To conduct a treatment such as test to measure various physical properties, weld or hot press at an ultrahigh temperature in an oxidative atmosphere by using an ultrahigh temperature electric resistance furnace having a hollow cylindrical zirconia resistor heat generator.

CONSTITUTION: A hollow cylindrical resistor heat generator 1 normally uses a zirconia heat generator and has a terminal 3 which has a predetermined length and thick diameters at both ends of the generator 2 having a small diameter at a center. In order to support the generator 1, upper and lower pipelike refractory materials 5 are provided, and leads 4 are buried therein. A zirconia cylindrical refractory material 6 and an alumina cylindrical refractory material 7 are sequentially disposed to surround the generator 1. In order to alleviate a thermal load to be applied to the material 6 and to prevent a ground fault from the generator 1, a space 8 is provided between the generator 1 and the material 6, and a preheating heater 9 is provided on a surface of the material 7. Vertically penetrating spaces 12 are formed in the generator 1 and the materials 5, a sample, etc., is inserted to be disposed in an ultrahigh temperature heating space 13 near a heat generating part 2.

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